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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44059.1-2024

**Medical gas pipeline systems - Part 1: Pipeline systems for
compressed medical gases and vacuum**

医用气体管道系统 第1部分: 压缩医用气体和真空用管道系统

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 1 of GB/T 44059 "Medical Gas Pipeline Systems". GB/T 44059 has been published in the following parts.

--- Part 1: Piping systems for compressed medical gases and vacuum.

This document is modified to adopt ISO 7396-1:2016 "Medical gas pipeline systems Part 1: Pipelines for compressed medical gases and vacuum system".

The technical differences between this document and ISO 7396-1:2016 and their reasons are as follows.

--- The oxygen concentration requirement is changed to "the oxygen concentration shall be greater than or equal to 99.5%" (see Chapter 1) to adapt to my country's technology condition;

--- The definitions of oxygen and 93% oxygen (oxygen-enriched air) (see 3.45 and 3.46) have been changed to clarify their meanings and adapt to my country's technical conditions;

--- Added the definition of "design pressure" (see 3.69) to clarify its meaning;

--- Replace IEC 60601-1-8 (see 6.1) with the normative reference YY9706.108 to adapt to my country's technical conditions;

--- Replace IEC 60601-1-2 (see 4.1) with the normative reference YY9706.102 to adapt to

my country's technical conditions;

--- Replace ISO 10524-2:2005 (see 4.3.5, 9.4, 9.5) with the normative reference YY/T 1439.2 to adapt to my country's technology condition;

---The material is changed to "seamless copper tube or seamless stainless steel tube" (see 4.3.6) to adapt to my country's technical conditions;

--- Replace EN13348 (see 4.3.6, 11.1.2) with the normative reference YS/T 650 to adapt to my country's technical conditions;

--- Replace ISO 14971 (see 5.2.2.3, 5.2.5, 8.1.2, 11.1.8) with the normative reference GB/T 42062 to adapt to my country Technical conditions;

--- Added normative reference document GB/T 12241 (see 5.2.6.7) to adapt to my country's technical conditions;

--- Replace ISO 21969:2009 (see 5.3.4) with the normative reference YY/T 1440 to adapt to my country's technical conditions;

--- The requirement for the medical air supply system for pressurizing the hyperbaric oxygen chamber is changed to "should be independent of the medical air supply system centrally supplied by the medical institution" Gas system" (see 5.5.1.4) to adapt to my country's technical conditions and improve operability;

--- The particle size (d) and the maximum allowable content of particulate matter per cubic meter (see 5.5.2.2) have been changed to adapt to my country's technical requirements.

Improve operability;

--- Added normative references GB/T 150 (all parts) (see 5.5.2.7, 5.6.6.4, 5.6.7), GB 50751 (see 5.9, 5.10, 10.1.2, 10.2) to adapt to my country's technical conditions;

--- Change "100%" in the medical air requirement to "105%" [see 5.5.3.1a)] to correspond to 23.63% (volume fraction) Numeric value;

--- The requirement for 93% oxygen (oxygen-enriched air) produced by the oxygen concentrator system is changed to "At the system design flow rate, the oxygen concentrator system the 93% oxygen (oxygen-enriched air) produced by the system should meet the requirements of WS1-XG-008-2012 (see 5.6.5.1) to adapt to my country's Technical conditions;

--- The filtration accuracy of each bacterial filter has been changed to adapt to my country's technical conditions and improve operability (see 5.7.11);

--- Replace ISO 3746 (see 6.3.2.1) with the normative reference GB/T 3768 to adapt to my country's technical conditions;

--- The compressed medical gas pipeline distribution system should be able to withstand